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subject

UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE

Project

Date

Author

TITLE

ANNUAL INSECT SURVEY

POWELL N. F.

1943

By

Lowell J. Farmer

Nov. 6, 1943

SUBJECT—

INDEX No.—

208 Forestry Bldg., C.S.C.
Fort Collins, Colorado
November 11, 1943

W. L. Robb, Asst. Regional Forester
Forest Service Building
Ogden, Utah

Dear Mr. Robb:

Your letter of November 9, S CONTROL - Powell, Insect by Mr. Miles and two copies of Mr. Farmer's survey report have been received. I agree with you that Mr. Farmer has given us a good picture of the situation on the Powell.

That the aggressiveness of the infestation has not let up can be illustrated by a summary of the table at the bottom of page 1 of Mr. Farmer's report as follows:

Estimate of 1943 infested trees	3,296
Number of 1943 infested trees treated	2,200
Number of 1943 trees untreated	<u>1,096</u>
Estimate of 1944 infested trees	2,186
Increase in infestation	<u>1,090</u>

I hardly know what answer to make about the advisability of spotting Kanab unit 100 percent when there is 594 infested trees scattered over 10,000 acres. Like you I am in favor of 100 percent spotting ahead of the control crews because this has proved to be the only means of cleaning up an area in one season. If the control on Kanab unit could be delayed until June I believe most of the infested trees could be located by their faded appearance, but with ranch labor making up the control crews I do not suppose that it will be possible to hold the crews that late in the season. It probably is advisable to delay final decision as to the method of spotting Kanab unit until some of the other units have been treated in order to get an idea as to how the estimates and time are working out. However, funds for treating the 594 trees should be requested along with those for the other units. It is doubtful that Kanab unit can be spotted and treated for \$5.50 per tree, but perhaps the cost per tree on some of the other units may be lower.

2-Mr. Robb-November 11, 1943

I feel that the work on the Powell should have high priority in the allotment of insect control funds. The situation is well in hand, but with the aggressive tendencies of the infestation it could soon become otherwise. It is recommended that the amount of \$12,158 be allotted for the control work as outlined in Mr. Farmer's report. Mr. Farmer's statement that they can get the necessary labor is encouraging.

A writeup of instructions on surveys and control for your handbook is definitely included in my plan of work for this winter. If you have any suggestions as to an outline to follow I shall be glad to have them. In any event you will have a chance to go over the writeup and incorporate additional ideas or revise as you see fit. I look upon the job as a cooperative undertaking to fulfill the needs as we see them, following concise and informative handbook style.

Very sincerely yours,

N. D. WYGANT, Entomologist

cc: Craighead (2)

208 Forestry Bldg., C.S.C.
Fort Collins, Colorado
November 11, 1943

To: Dr. F. C. Craighead, In Charge, Forest Insect Investigations
From: H. D. Wygant, Entomologist, Fort Collins, Colorado
Subject: Black Hills Beetle Control Powell National Forest

Enclosed is a copy of Mr. Farmer's annual insect survey for the Powell N.F. and two copies of my letter to Mr. Robb recommending that the control work as planned by Mr. Farmer be carried out.

The Powell did some very good control work last year at a relatively low cost per tree. The areas treated showed a big reduction from last year. The areas recommended for treatment this year carried a light infestation last year. On some of these areas the number of new attacks have more than doubled. The situation is well in hand and it seems that the only way that it can be held there is by annual control until the present crop of mature timber is harvested or the aggressive tendencies of the infestation has subsided.

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE
INTERMOUNTAIN REGION



ADDRESS REPLY TO
REGIONAL FORESTER
AND REFER TO

FOREST SERVICE BUILDING
OGDEN, UTAH

November 9, 1943.

S
CONTROL - Powell
Insect

Dr. N. D. Wygant
208 Forestry Bldg., C.S.C.
Fort Collins, Colorado

Dear Dr. Wygant:

Attached are two copies of the Powell fall insect control survey report for your consideration.

We believe Mr. Farmer has given us a pretty good picture of the situation there.

The Powell seems to have:

1. Control jobs to do on units 12 and two bad spots on unit 29 near Teasdale.
2. Nothing else epidemic on the average. We have not yet received the large scale maps but Mr. Farmer has indicated by cross hatching the concentrations on units 1 and 3. On unit 5 there seems to be a scattering of new attacks over the entire unit.
3. Good results from the winter control on units 2 and 15.
4. Not so good results on the spring clean-up on unit 1 as Mr. Farmer points out.

There seems to be a general build-up on areas in an endemic condition which is not encouraging. You will remember it was so dry last summer we feared such might be the case. For this reason we feel inclined to agree with Mr. Farmer's recommendations throughout.

So far 100 percent spotting on unit 5 - we wonder. Costs would be high but as illustrated on unit 1 without it the area doesn't get cleaned up. What is your idea?

We have borrowed \$1500 from the Wasatch so the Powell can keep on the experienced men they had on the survey and will await your recommendations before asking the Chief for the \$12,155 the Powell asks for.

We have not yet received the Ashley survey report but understand they found about 1,000 lodgepole pine to treat. Ranger Hurst found 750 ponderosa pine in need of treatment and we have given them \$500 as a starter for this work. We have asked them to hurry along their report.

We wonder if you will be able to get out the handbook instructions for insect control surveys and treatment this winter.

Very sincerely yours,

W. L. ROBB, Asst. Regional Forester

By  Acting.

Enclosures.

S
 CONTROL - Powell
 Insect

Panguitch, Utah
 November 6, 1943

INSECT CONTROL SURVEY ON THE POWELL
 NATIONAL FOREST & Fall, 1943

Results of the survey of the Black Hills beetle are as follows:

Unit Name	Percent Cruise	Approx. Acres Type Area	Total Ch. Strip	Strip Multiplier	N. A. on Total Strip	N. A. on Total N. A.	N. A. per Ten Acres
Blue Fly No. 1	4.35	16,500	7180	22.98	21	483	0.29
Park No. 2	5.15	7,030	3620	19.42	5	97	0.14
Badger N. 3	5.02	7,130	3578	19.93	32	638	0.89
Blubber No. 4	5.31	6820	3621	18.83	7	132	0.19
Kanab No. 5	4.38	10,220	4475	22.84	26	594	0.58
Podunk No. 6	3.21	6,240	2079	30.01	5	150	0.24
Mill No. 7	5.77	6,900	3986	17.31	0	0	0
Cameron No. 12	2.81	2,720	765	35.55	9	320	1.18
Sweetwater No. 14	3.90	3,200	1246	25.68	1	26	0.08
Horse Creek No. 15	4.54	2,450	1113	22.01	3	66	0.27
Dark Valley No. 29	6.30	2,000	1259	15.88	11	175	0.87
Totals	4.61	71,210	32922		120	2681	

It is seen from a study of the table that there is still a considerable scattering of infestation of the Black Hills beetle, (*Dendroctonus ponderosae* Hopk.) on various control units of the Powell and it can also be seen that reduction of infestation is treated last bug year on control units 2, 14, and 15, is marked.

There has been no let-up in the aggressiveness of infestations on the forest since the epidemics were first noted in the Summer and Fall of 1935. Continued action from then until now has resulted in very definite control of the beetle but it must be emphasized that there must be no let-up in control measures or slackening of vigilance which would most certainly result in another wide-spread epidemic.

Newly attacked trees were heavily hit but most of those found were singles. There were occasional groups of two and three trees on the strips and none larger were found. We believe this condition is due, not to any decrease in the virulence of the beetles, but to control measures. All of the areas surveyed have been treated in past years, some once, but most of them several times.

Here is a comparison of units surveyed with last years results:

Unit No.	Infested Trees		Control	
	1943	1944		
1	561	483	Spring Control-Hot Spotting	
2	1296	97	Winter Control	
3	242	638	No Control	
4	78	132	No Control	
5	171	594	No Control	
6	62	150	No Control	
7	82	0	No Control	
14	220	26	Spring Control-Hot Spotting	41
15	584	66	Winter Control	516
	3296	2186		2,200

Treated
 past
 season
 456
 1187

The Spring control this year by locating trees through discoloration was not too effective because many of them did not turn color until after treating was discontinued. It will be important to determine whether we want to do any more of this type of work because the Kanab Unit consisting of about 10,000 acres has 600 trees scattered all over the entire area. Spotting for these trees will run into money and we would like a decision as to its feasibility. What we had in mind doing was leaving this unit for Spring control and attempting to pick up as many trees as possible through random spotting. The other units on which treating is indicated have more concentrated infestations and of course 100 percent spotting is in order.

The units we desire to treat with numbers of trees and time of treatment are as follows:

<u>Unit No.</u>	<u>No. of Trees</u>	<u>Time of Treatment</u>
1	483	Fall and Winter
3	638	Fall and Winter
5	594	Spring
12	320	Fall and Winter
29	175	Fall and Winter
Total	2210	

This survey was run by a crew of four men, from October 4 to November 6 and was made according to the procedure outlined by Senior Entomologist James O. Evenden in his paper, "Instructions for Conducting Extensive Bark Beetle Surveys by the Method of Sample Strips." Mr. Thomas Partridge who was our insect control foreman last winter, was Chief of Party, and Mr. Vane Sandine, Mr. Otto Sandine, and Mr. Ferrell Moosman, all of whom have bugged with us for a long time, were party members. The writer spent two days instructing the party thoroughly and checked them frequently. One week in October was lost because of storms.

All the strips in the upper East Fork area were tied into the new traverse pegs set in by Mr. Clark Miles last summer and plotted on the 4 inch maps being mailed to the Regional Office. The small maps attached to this report show the areas surveyed and those on which treatment is required.

Survey costs chargeable to allotted funds are as follows:

Salaries:-	\$621.51
Mileage:-	69.86
Total	691.37

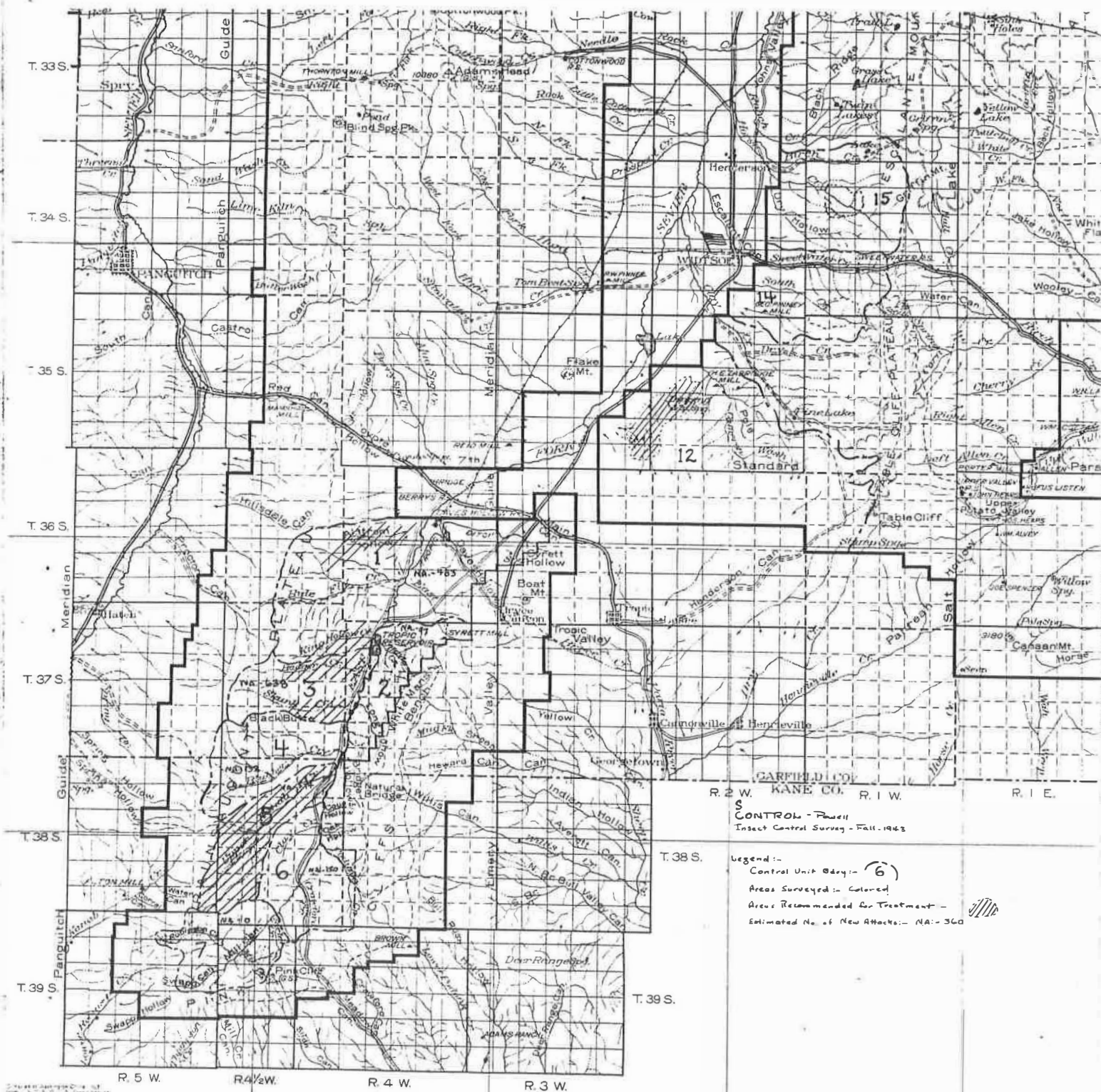
The average cost per tree for treating last year was \$4.98 and this may be somewhat higher this year because of wage and overtime increases. Possibly \$5.50 per tree will be about average. Figuring 2210 trees to be treated we will require \$12,155 to carry out the program as planned. We cannot say what the additional cost per tree would be for the 100 percent spotting in the Kanab Unit. That is the only way to get the bugs even though the initial cost may be more.

Right now it looks as though we can get all the labor we will need for the Fall and Winter projects and would like to start operations if possible not later than November 15. We are fortunate in being able to get the same spotting crew we had last year.

Submitted November 6, 1943

Lowell J. Farmer

Lowell J. Farmer, D. F. R.



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S
CONTROL - Powell
Insect Control Survey
Fall - 1953

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R. 3 E.

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